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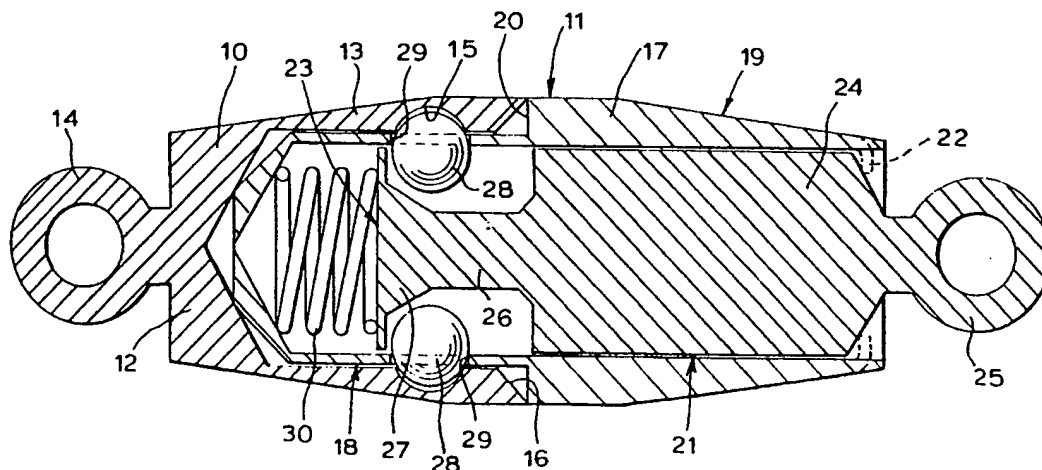
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(58) Field of search

E2A

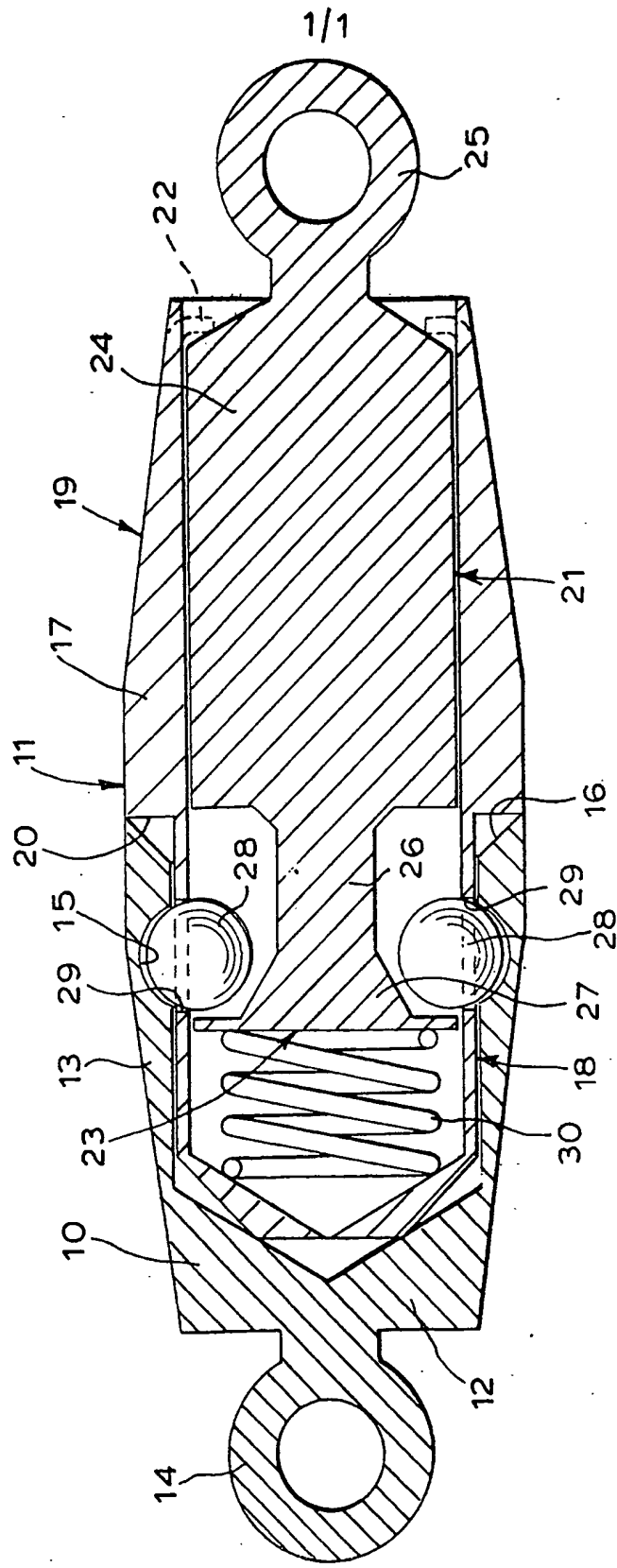
(54) A fastener

(57) A fastener e.g. for jewellery has two parts which can be releasably fastened together. One of the parts (10) comprises a skirt (13) open at one end with a ring or eyelet (14) at its other end and an internal groove (15). The other part (11) comprises a hollow body (17) having a longitudinally movable latching member (21) and at least two latching devices e.g. balls (28) able to project through holes (29) in the wall of the body. The latching member has at one end a head (23) and at the other end a ring or eyelet (25). A resilient means e.g. a spring (30) urges a tapered portion (27) of the head in a direction to cause the balls (28) to move outwardly in their respective holes (29) and to engage the groove (15). Inward movement of the latching member (21) against the spring (30) allows the balls (28) to be released.



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SPECIFICATION

A fastener

5 This invention relates to a fastener particularly but not exclusively for a necklace, bracelet or the like.

According to the invention there is provided a fastener having two parts which can be releasably fastened together, one of the parts comprising a skirt open at one end and having attachment means at or adjacent to its other end and an internal circumferentially extending groove intermediate its ends, the other part comprising a hollow body having first and second end portions, a latching member held captive relative to the body and movable longitudinally therein, and at least two latching devices carried by the body and able to project through respective transversely extending holes in the wall of the first end portion of the body, the latching member having at one end a head and at the other end attachment means which project outwardly from the free end of the second end portion of the body, the head having a portion which is tapered inwardly towards the other end of the latching member and there being resilient means between the head of the latching member and the free end of the first end portion of the hollow body to urge the tapered portion of the head into engagement with the latching devices to cause the latter to move outwardly in their respective holes, the latching devices being aligned with the circumferential groove in the one fastener part when the latter is fitted over the first end portion of the other fastener part so that the latching devices project into the groove and hold the two fastener parts together.

Preferred and/or optional features of the invention are set forth in claims 2-7.

The fastener is particularly suitable for use in conjunction with items of jewellery, such as necklaces, bracelets or the like.

The invention will now be more particularly described, by way of example, with reference to the accompanying drawing which is a longitudinal section through one embodiment of a fastener according to the invention, shown on an enlarged scale with the two fastener parts fastened together.

Referring to the drawing the fastener shown therein comprises two fastener parts 10 and 11. The part 10 is generally cup-shaped and has an end wall 12 and a skirt 13. An attachment member in the form of a ring or eyelet 14 is integral with the end wall 12. The skirt has an internal circumferentially extending groove 15 intermediate its ends and a bevelled edge 16 at its open end to help guide it over the part 11.

The part 11 comprises a hollow body 17 closed at one end and having first and second end portions 18 and 19 respectively with a

radial shoulder 20 therebetween, and a latching slider 21 held captive with respect to the body 17 by an intumed lip or flange 22 at the other end of the body 17.

70 The slider 21 has a head 23 at one end, a guide portion 24 with an integral attachment member in the form of a ring or eyelet 25 at the other end, and a stem portion 26 between the head 23 and the guide portion 24. The ring or eyelet 25 projects outwardly from the free end of the end portion 19 of the hollow body 17 and the head 23 has a frusto-conical portion 27 which tapers inwardly towards the guide portion 24.

80 Two latching devices (although there could be more than two) in the form of balls 28 are located in respective diametrically opposite transversely extending holes 29 in the wall of the first end portion 18 of the hollow body 17, and between the head 23 and the guide portion 24 of the slider 21. A spring 30 or other resilient member such as a block of resilient material, e.g. rubber, is interposed between the head 23 and the closed end of the hollow body 17. This spring 30 urges the frusto-conical portion 27 of the head into engagement with the latching balls 28 so as to push these radially outwardly in their respective holes 29, although the force of the spring 30 is insufficient to push the balls 29 totally through the holes 29.

In order to fasten the two parts 10 and 11 together, the part 10 is slid over the first end portion 18 of the part 11 until it makes contact with the shoulder 20. In this position the balls 28 seat in the groove 15 to hold the two parts 10 and 11 together.

In order to release the two parts 10 and 11, the slider 21 is pushed inwardly against the force of the spring 30 so as to disengage the frusto-conical portion 27 of the head 23 from the balls 28, whereupon the two parts 10 and 11 can be pulled apart.

As shown in the drawing, the two parts 10 and 11, when fastened together, define a smooth outer contour which is symmetrical on either side of a central transverse plane which contains the line of contact between the part 10 and the shoulder 20 on the part 11.

115 A fastener as described above is ideally suited, *inter alia* for use in conjunction with an item of jewellery, such as a necklace or a bracelet, the two ends of which are connected to the rings or eyelets 14 and 25 respectively.

CLAIMS

1. A fastener having two parts which can be releasably fastened together, one of the parts comprising a skirt open at one end and having attachment means at or adjacent to its other end and an internal circumferentially extending groove intermediate its ends, the other part comprising a hollow body having first and second end portions, a latching member held captive relative to the body and

movable longitudinally therein, and at least two latching devices carried by the body and able to project through respective transversely extending holes in the wall of the first end portion of the body, the latching member having at one end a head and at the other end attachment means which project outwardly from the free end of the second end portion of the body, the head having a portion which is tapered inwardly towards the other end of the latching member and there being resilient means between the head of the latching member and the free end of the first end portion of the hollow body to urge the tapered portion of the head into engagement with the latching devices to cause the latter to move outwardly in their respective holes, the latching devices being aligned with the circumferential groove in the one fastener part when the latter is fitted over the first end portion of the other fastener part so that the latching devices project into the groove and hold the two fastener parts together.

2. The fastener of claim 1, wherein the latching devices are balls.

3. The fastener of claim 1 or claim 2, wherein the attachment means on the one part and on the latching member of the other part are each in the form of a ring or eyelet.

4. The fastener of anyone of claims 1-3, wherein the attachment means are integral with the one body part and the latching member of the other part, respectively.

5. The fastener of anyone of the preceding claims wherein the latching member is held captive relative to the hollow body by an in-turned lip or flange at the free end of the second end portion of the body.

6. The fastener of anyone of the preceding claims, wherein the latching member has a guide portion immediately adjacent to the attachment means thereon and a stem portion intermediate the guide portion and the head.

7. The fastener of anyone of the preceding claims, wherein the fastener is symmetrical or substantially symmetrical about a central transverse plane.

8. A fastener substantially as hereinbefore described with reference to, and as shown, in the accompanying drawings.

9. An item of jewellery provided with a fastener according to anyone of the preceding claims.

10. An item of jewellery according to claim 8, in the form of a necklace.

11. An item of jewellery according to claim 9, in the form of a bracelet.

CLAIMS

Superseded claims 1-11
New claims 1-10

1. A fastener for jewellery having two parts which can be releasably fastened together, one of the parts comprising a skirt open at one end and having attachment means in the

form of a ring or eyelet at or adjacent to its other end and an internal circumferentially extending groove intermediate its ends, the other part comprising a hollow body having first and second end portions, a latching member held captive relative to the body and movable longitudinally therein, and at least two latching devices carried by the body and able to project through respective transversely extending holes in the wall of the first end portion of the body, the latching member having at one end a head and at the other end attachment means in the form of a ring or eyelet which projects outwardly from the free end of the second end portion of the body, the head having a portion which is tapered inwardly towards the other end of the latching member and there being resilient means between the head of the latching member and the free end of the first end portion of the hollow body to urge the tapered portion of the head into engagement with the latching devices to cause the latter to move outwardly in their respective holes, the latching devices being aligned with the circumferential groove in the one fastener part when the latter is fitted over the first end portion of the other fastener part so that the latching devices project into the groove and hold the two fastener parts together.

2. The fastener of claim 1, wherein the latching devices are balls.

3. The fastener of claim 1 or claim 2, wherein the attachment means are integral with the one body part and the latching member of the other part, respectively.

4. The fastener of anyone of the preceding claims wherein the latching member is held captive relative to the hollow body by an in-turned lip or flange at the free end of the second end portion of the body.

5. The fastener of anyone of the preceding claims, wherein the latching member has a guide portion immediately adjacent to the attachment means thereon and a stem portion intermediate the guide portion and the head.

6. The fastener of anyone of the preceding claims, wherein the fastener is symmetrical or substantially symmetrical about a central transverse plane.

7. A fastener substantially as hereinbefore described with reference to, and as shown, in the accompanying drawings.

8. An item of jewellery provided with a fastener according to anyone of the preceding claims.

9. An item of jewellery according to claim 8, in the form of a necklace.

10. An item of jewellery according to claim 8, in the form of a bracelet.